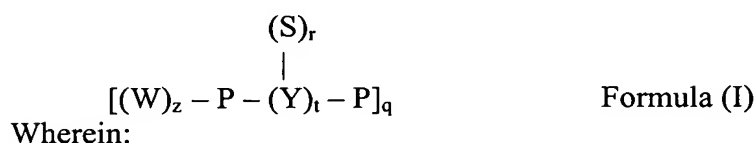


Claim 1 (canceled).

Claim 2 (currently amended). An isolated epitope comprising the formula

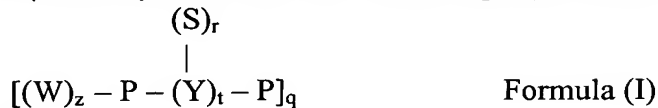


- W is any amino acid other than Aspartate and Glutamate
- Y is ~~an amino acid selected from the group consisting of Tyrosine, Asparagine, Serine and Threonine and further comprises a peptido or glyco or lipo~~ conjugate of Tyrosine
- P is independently selected from the group consisting of  $(A)_m(A)_n(X)_u$ ,  $(X)_u(A)_n(A)_m$ ,  $(A)_n(X)_u(A)_m$ ,  $(A)_n(A)_m(X)_u$ ,  $(X)_u(A)_m(A)_n$ , and  $(A)_m(X)_u(A)_n$
- S is sulfate or a sulfated molecule
- X is any amino acid except Aspartate, Glutamate, or Tyrosine
- A is independently selected from the group consisting of any negatively charged amino acid, leucine, isoleucine, proline, phenylalanine, serine, and glycine
- q is ~~1 to 6~~ 3
- z is 0, 1, or 2
- r is ~~0 or~~ 1
- t is 1, 2 or 3
- u is 0 to 2
- n is 0 to 3
- m is 0 to 3

wherein if  $n = 0$  then  $m > 0$ ; wherein if  $m = 0$  then  $n > 0$ ; wherein ~~if q is 1, r is 1, and if q is > 1 at least one of Y is sulfated~~; and

further wherein the isolated epitope is capable of being bound by a human antibody, antigen-binding fragment thereof, or complex thereof comprising at least one antibody or antigen-binding fragment thereof, and wherein the human antibody, antigen-binding fragment thereof, or complex thereof comprises a first hypervariable region comprising SEQ ID NO: 8.

Claim 3 (currently amended). An isolated epitope comprising the formula



Wherein:

- W is Glycine,
- Y is ~~an amino acid selected from the group consisting of Tyrosine, Asparagine, Serine and Threonine~~ and at least one Y is a peptido conjugate of Tyrosine or a glyco-conjugate of Asparagine, Serine or Threonine
- P is independently selected from the group consisting of  $(A)_m(A)_n(X)_u$ ,  $(X)_u(A)_n(A)_m$ ,  $(A)_n(X)_u(A)_m$ ,  $(A)_n(A)_m(X)_u$ ,  $(X)_u(A)_m(A)_n$ , and  $(A)_m(X)_u(A)_n$
- S is sulfate or a sulfated molecule
- X is any amino acid except Aspartate, Glutamate, or Tyrosine
- A is independently selected from the group consisting of any negatively charged amino acid, leucine, isoleucine, proline, phenylalanine, serine, and glycine and at least one A is Glutamate,  $\gamma$  Carboxy Glutamate or Aspartate
- q is ~~1, 2, or 3~~
- z is 0, 1, or 2
- r is ~~0 or 1~~
- t is 1, 2 or 3
- u is 0 to 2
- n is 0 to 3
- m is 0 to 3

wherein if  $n = 0$  then  $m > 0$ ; wherein if  $m = 0$  then  $n > 0$ ; wherein ~~if q is 1, r is 1, and if q is >1~~ at least one of Y is sulfated; and

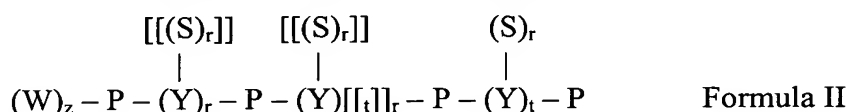
further wherein the isolated epitope is capable of being bound by a human antibody, antigen-binding fragment thereof, or complex thereof comprising at least one antibody or antigen-binding fragment thereof, and wherein the human antibody,

antigen-binding fragment thereof, or complex thereof comprises a first hypervariable region comprising SEQ ID NO: 8.

Claim 4 (canceled).

Claim 5 (canceled).

Claim 6 (currently amended). An isolated epitope comprising the formula



Wherein:

- W is any amino acid other than Aspartate and Glutamate
- Y is an amino acid selected from the group consisting of Tyrosine, Asparagine, Serine and Threonine and further comprises a peptido or glyco or lipo conjugate
- P is independently selected from the group consisting of (A)<sub>m</sub>(A)<sub>n</sub>(X)<sub>u</sub>, (X)<sub>u</sub>(A)<sub>n</sub>(A)<sub>m</sub>, (A)<sub>n</sub>(X)<sub>u</sub>(A)<sub>m</sub>, (A)<sub>n</sub>(A)<sub>m</sub>(X)<sub>u</sub>, (X)<sub>u</sub>(A)<sub>m</sub>(A)<sub>n</sub>, and (A)<sub>m</sub>(X)<sub>u</sub>(A)<sub>n</sub>
- S is a sulfate or a sulfated molecule
- X is any amino acid except Aspartate, Glutamate or Tyrosine
- A is independently selected from the group consisting of any negatively charged amino acid, leucine, isoleucine, proline, phenylalanine, serine, and glycine
- z is 0, 1, or 2
- r is ~~0 or~~ 1
- t is 1, ~~2 or 3~~
- u is 0 to 2
- n is 0 to 3
- m is 0 to 3

wherein if n = 0 then m > 0; wherein if m = 0 then n > 0; ~~wherein at least one Y is~~  
sulfated; and wherein (Y)<sub>t</sub> is not sulfated,

further wherein the isolated epitope is capable of being bound by a human antibody, antigen-binding fragment thereof, or complex thereof comprising at least one antibody or antigen-binding fragment thereof, and wherein the human antibody, antigen-binding fragment thereof, or complex thereof comprises a first hypervariable region comprising SEQ ID NO: 8.

**Claim 7 (currently amended).** The isolated epitope of claim 6 wherein:

W is Glycine;

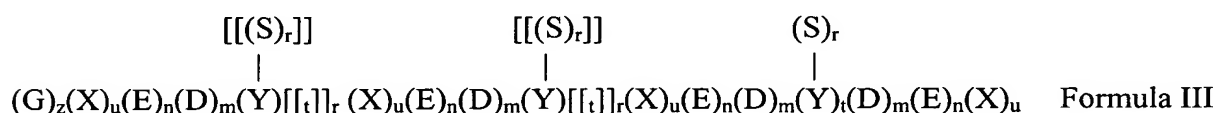
at least one Y is a peptido conjugate of Tyrosine or a glyco conjugate of Asparagine, Serine or Threonine; and

at least one A is Glutamate,  $\gamma$  Carboxy Glutamate, Aspartate, Leucine, Isoleucine, Proline, Phenylalanine, serine, or glycine.

**Claim 8 (previously presented).** The isolated epitope of claim 7 wherein:

at least one Y is a peptido conjugate of Tyrosine.

Claim 9 (currently amended). An isolated epitope comprising the formula



Wherein:

G is Glycine

E is Glutamate

D is Aspartate

Y is Tyrosine

S is sulfate or a sulfated molecule

X is any amino acid except Glycine, Glutamate, Aspartate, and Tyrosine,

$z$  is 0, 1, or 2

t is ~~1, 2 or 3~~

$r$  is 0 or 1

u is 0 to 2

n is 0 to 3

m is 0 to 3

wherein  $Y_r$  is not sulfated; wherein at least one Y is sulfated; wherein if  $n = 0$  then  $m > 0$ ; wherein if  $m = 0$  then  $n > 0$ ; and further wherein the isolated epitope is capable of being bound by a human antibody, antigen-binding fragment thereof, or complex thereof comprising at least one antibody or antigen-binding fragment thereof, and wherein human antibody, antigen-binding fragment thereof, or complex thereof comprises a first hypervariable region comprising SEQ ID NO: 8.

Claim 10 (previously presented). The isolated epitope of claim 9 wherein  $r$  is 1.

Claim 11 (previously presented). The isolated epitope of any one of claims 2-4 and 6-10, further comprising a lipid, carbohydrate, peptide, glycolipid, glycoprotein, lipoprotein, and/or lipopolysaccharide molecule.

Claim 12 (currently amended). The A-synthetic isolated epitope of any one of claims 2-4 and 6-10, wherein the epitope is synthetic.

Claim 13 (previously presented). The isolated epitope of any one of claims 2-4, and 6-10, wherein the isolated epitope comprises at least one post-translational modification in addition to sulfation.

Claims 14-152 (canceled).

Claim 153 (previously presented). An isolated epitope of claim 9 wherein the epitope comprises GPIba amino acid sequence Tyr 276 to Glu 282, wherein at least one of amino acids 276, 278 and 279 is sulfated.

Claim 154 (previously presented). The isolated epitope of claim 153 further comprising GPIba amino acids 283-285.

Claim 155 (canceled).

Claim 156 (currently amended). An isolated epitope of claim 9 wherein the epitope comprises a GP1b $\alpha$  N-terminal peptide having an apparent molecular weight of about 40 KDa, said peptide comprising an epitope having the sequence YDYYPEE (SEQ ID NO: 266), wherein the third tyrosine in the sequence YDYYPEE is sulfated and wherein the first and second tyrosine are not sulfated ~~at least one tyrosine residue in the epitope is sulfated.~~

Claim 157-163 (canceled).

Claim 164 (currently amended). An isolated epitope of GP1b $\alpha$  comprising the amino acid sequence of YDYYPEE (SEQ ID NO: 269), wherein the third tyrosine in the sequence YDYYPEE is sulfated and wherein the first and second tyrosine are not sulfated ~~the first tyrosine residue in the epitope is sulfated~~, and wherein the isolated epitope is capable of being bound by a human antibody, antigen-binding fragment thereof, or complex thereof comprising at least one antibody or antigen-binding fragment thereof, and wherein the human antibody, antigen-binding fragment thereof, or complex thereof comprises a first hypervariable region comprising SEQ ID NO: 8.